

# Claims

- [c0001] 1. An apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator arranged in each pupil plane in the observation beam path and containing at least one layer modifying the phase or amplitude, and of a stop arranged in the illumination beam path, wherein the modulator is mounted tiltably.
- [c0002] 2. The apparatus as defined in Claim 1, wherein the layers of the modulator are configured in such a way that the greatest possible phase shift is already achieved by a slight tilt.
- [c0003] 3. The apparatus as defined in Claim 1, wherein the layers comprise glass plates of various glasses.
- [c0004] 4. The apparatus as defined in one of the foregoing claims, wherein the modulator possesses a defined variable layer configuration.
- [c0005] 5. An apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator arranged in each pupil plane in the observation beam path and containing at least one

layer modifying the phase or amplitude, and of a stop arranged in the illumination beam path, wherein for phase shifting, optical polarization means in combination with retardation plates are present.

[c0006] 6. An apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator arranged in each pupil plane in the observation beam path and containing at least one layer modifying the phase or amplitude, and of a stop arranged in the illumination beam path, wherein various modulators are arranged on a carrier in a manner introducible into the beam path, and are selectively mounted, tiltably individually or tiltably together with the carrier, on that carrier.

[c0007] 7. A method for implementing a defined phase shift in the implementation of phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator arranged in each pupil plane in the observation beam path and containing at least one layer modifying the phase or amplitude, and of a stop arranged in the illumination beam path, wherein the modulator is tilted.